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David C. Gelvin

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EXAMINER

SCIACCA, SCOTT M

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/684,742	<b>Applicant(s)</b> GELVIN ET AL.	
	<b>Examiner</b> Scott M. Sciacca	<b>Art Unit</b> 2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 and 50-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 and 50-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/10/2009</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is responsive to communications filed on June 10, 2009. Claims 1 and 56 have been amended. Claim 49 has been cancelled. Claims 1, 46, 48, 50, 51, 54, and 56 are independent. Claims 1-48 and 50-56 are pending in the application.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Although the specification has been amended to recite a “computer readable medium”, the specification still fails to provide proper antecedent basis for the “computer readable medium” as claimed since the “computer readable medium” is not defined in such a way that the Examiner can determine whether it is limited to statutory forms of computer storage.

### ***Allowable Subject Matter***

3. The Examiner has previously indicated allowable subject matter in this case. Applicant has amended the claims in accordance with the indications of related applications, however has deleted significant portions of the claim as well. The Examiner believes that the deleted matter in conjunction with the newly amended claims would overcome the rejection of claim 1. The Examiner respectfully requests the cancellation of claims 46-47, 50, and 54-55, address the objection over the term

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“computer readable medium”, the filing of Terminal Disclaimers to overcome the rejections as dictated below, and the incorporation of the deleted limitations into the amended independent claims, in order to move this case to allowance.

***Claim Rejections - 35 USC § 101***

4. In light of the cancellation of Claim 49, the rejection under this heading is hereby withdrawn.

***Terminal Disclaimer***

5. The terminal disclaimer filed on June 10, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent no. 6,859,831 has been reviewed and is accepted. The terminal disclaimer has been recorded.

6. The terminal disclaimer filed on June 10, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent no. 6,826,607 has been reviewed and is accepted. The terminal disclaimer has been recorded.

7. The terminal disclaimer filed on June 10, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of

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Patent no. 7,020,701 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 9-14, 16, 18, 20-24, 27-38, 40, 41, 43, and 45-48 and 50-55 of Application no. 09/684,387 contains every element of claims 1-56 of the instant application and as such anticipates claims 1-56 of the instant application.

Claims 1-32, 34-48, 50-63, 65-81, 83-85, 91, 92, 94, 95, 97, 99-101, 103, 106, and 108-119 of Application no. 09/684,706 contains every element of claims 1-56 of the instant application and as such anticipates claims 1-56 of the instant application.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8, 14-24, 30, 34, 39-45, 48 and 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare et al. (USPN 6,414,955) (hereinafter Clare) in view of Wesson et al. (Network Structures for Distributed Situation Assessment; IEEE; copyright 1981) (hereinafter Wesson).

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9. Referring to claim 1, Clare discloses a method for providing a sensor network comprising a plurality of nodes, including a sensor node comprising a sensor (e.g. abstract), comprising:

organizing the plurality of nodes into a plurality of clusters (i.e. set of neighboring nodes) by:

determining a cluster for a start node (i.e. if no invite request is received, node becomes the inviting node (Fig. 12a, refs. 224, 226);

transmitting an assembly packet (i.e. new node invitation packet and communication schedule packets) from the start node to each node neighboring the start node, wherein the assembly packet includes a cluster indication (i.e. communication schedule) (Figs 12a-c, ref. 274; col. 14, line 56 to col. 15, line 24);

upon reception of the assembly packet at a node, determining a cluster for the node based on the cluster indication, modifying the cluster indication in the assembly packet, and transmitting the assembly packet with the modified cluster indication to each node neighboring the node (i.e. communication schedule is distributed to all packets in the network, indicating the presence of the new node) (col. 15, lines 25-43).

collecting data from the at least one environment (col. 6, lines 19-21);

distributing storage and processing of the collected data among the plurality of network elements in response to the node information (col. 18, lines 35-64).

Clare does not specifically disclose distributing storage and processing of the collected data among the plurality of clusters. In analogous art Wesson discloses a distributed sensor network (Figures 1-4) which discloses aggregating, distributing and

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processing the collected data among the plurality of clusters (Figures 3-4; p. 8, col. 2 to p. 9, col. 1; p. 11: "communication restricted to flow between adjacent layers"..."activities should be divided among multiple cooperating knowledge sources"). It would have been obvious to one of ordinary skill in the art to combine the teaching of Clare with Wesson in order to provide an improved method for distributed situation assessment amongst the nodes of Clare, thereby enabling the sensors to communicate data with one another.

10. Referring to claim 2, Clare discloses the start node is a sensor node (i.e. all the nodes can be sensor nodes) (e.g. abstract).

11. Referring to claim 3, Clare-Wesson discloses automatically organizing the plurality of network elements in response to the node information, wherein the automatic organizing comprising automatically controlling data transfer (i.e. routing data to user terminals), processing (i.e. using user profiles to generate a warning based on sensor data), and storage among the plurality of clusters (storing the data in data buffers (col. 16, lines 17-27; col. 18, lines 35-64; Wesson: Figures 3-4; p. 8, col. 2 to p. 9, col. 1; p. 11).

12. Referring to claim 4, Clare-Wesson discloses supporting a plurality of levels of synchronization among different subsets of the plurality of network elements (i.e. subordinates, commanders, high level layers, etc.) (Wesson: p. 8, col. 2; Fig. 4).



13. Referring to claim 5, Clare discloses controlling data processing using at least one processing hierarchy (i.e. prioritization of messages), the at least one processing hierarchy controlling communications among the plurality of network elements (col. 15, lines 10-24).

14. Referring to claim 6, Clare discloses comprising self-assembling the plurality of network elements, wherein search and acquisition modes of the at least one node of a second type search for participating ones of the plurality of network elements, whether each of the participating ones of the plurality of network elements are permitted to join the sensor network using a message hierarchy, wherein the sensor network is surveyed at intervals for new nodes and missing nodes and the new node is able to join into the sensor network based on a challenge and response session (i.e. send invite, and respond to the invitation) (Clare: col. 8, line 49 to col. 10, line 51).

15. Referring to claim 8, Clare discloses the at least one function includes data acquisition (i.e. turn sensors to highest alert activity) (col. 15, lines 10-15).

16. Referring to claim 14, Clare discloses controlling data processing, transmission, and storage among the plurality of network elements in response to a decision probability of a detected event (i.e. power down for five minutes transmitted to the node

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from the user) (col. 15, lines 13-15). Wesson further discloses this at p. 17, col. 2, to p. 18, col. 2).

17. Referring to claim 15, Clare discloses performing processing of the collected data in response to parameters established by a user (col. 18, lines 50-64).

18. Referring to claim 16, Clare discloses the processing is performed in response to at least one result of the energy detection (col. 18, lines 50-64). Wesson further disclose this at p. 17, col. 2 to p. 18, col. 2.

19. Referring to claims 17, 20-23, Clare-Wesson discloses aggregating data processed in a plurality of nodes for further processing by other nodes (i.e. hypothesizing about tasks based on received data can be reasonably construed as aggregating data) (Wesson: p. 8, col. 2 ).

20. Referring to claim 18, Clare discloses the processing comprises selecting at least one data type for processing, selecting at least one processing type, selecting at least one of the plurality of network elements to perform the selected at least one processing type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the sensor network (col. 18, lines 35-64). Wesson further discloses this at p. 14, col. 2, to p. 15, col. 1; p. 20, col. 1.

21. Referring to claim 19, Clare discloses the selection of at least one processing type comprises determining at least one probability (i.e. decision-making) associated with a detected event (monitored environment settings) and selecting at least one processing type in response to the at least one probability (i.e. if the decision is true, do something different than if the decision is false) (Figure 15; col. 18, lines 35-64).

22. Referring to claim 24, Clare discloses the communication mode is wireless communication (e.g. abstract).

23. Referring to claim 34, Clare discloses establishing at least one redundant information pathway among the plurality of network elements (Figure 8).

24. Referring to claim 39, Clare discloses at least one node of a first type and at least one node of a second type include at least one sensor selected from a group consisting of seismic, acoustic, infrared, thermal, force, vibration, pressure, humidity, current, voltage, magnetic, biological, chemical, acceleration, and visible light sensors (col. 14, lines 12-34).

25. Referring to claim 40, Clare discloses at least one of the plurality of network elements determines a position of at least one other of the plurality of network elements (col. 8, lines 15-25).

26. Referring to claim 41, Clare discloses transferring software among the plurality of network elements, wherein the software transfer is remotely controllable (col. 15, lines 10-24).

27. Referring to claim 42, Clare discloses the invention substantively as described in claim 1. Clare does not specifically state protecting communications among the elements using a public key security protocol. "Official Notice" is taken that both the concept and advantages of providing for public key encryption in wireless devices is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to include public key encryption to the system of Clare to provide a basic level of security, thereby reducing the occurrences of eavesdropping by hackers and malcontents.

28. Referring to claim 43, Clare discloses determining at least one position of one of the network elements using location information from GPS device (col. 7, line 58 to col. 8, line 6).

29. Referring to claim 44, Clare discloses the plurality of node types comprise sensor nodes (e.g. abstract; Figure 14).

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30. Referring to claim 45, Clare discloses supporting short range and long range communications among the plurality of network elements (Figure 1).

31. Claims 30, 48 and 52-56 are rejected for similar reasons as stated above.

Claims 25-29, 31, 32, 46, 47, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare-Wesson as applied above in view of Myer.

32. Referring to claim 25, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not specifically disclose the network includes a gateway, a server, and at least one hybrid wired and wireless network. Myer discloses another sensor network which includes at least one gateway 12, at least one server 25, and at least one hybrid wireless and wired network (Figure 1; col. 2, lines 52-67). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Myer with Clare to facilitate device configuration in a network as supported by Myer (col. 1, lines 26-30).

33. Referring to claim 26, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not specifically disclose the network is the Internet. Myer discloses the network is the Internet 22, (Figure 1). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the

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teaching of Myer with Clare to facilitate device configuration in a network as supported by Myer (col. 1, lines 26-30).

34. Referring to claim 27, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose providing remote accessibility using WWW-based tools to data, code, management, and security functions. Myer discloses providing remote accessibility using WWW-based tools to data, code, management, and security functions (Figure 2). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Myer with Clare to facilitate device configuration in a network as supported by Myer (col. 1, lines 26-30).

35. Referring to claim 28, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose the at least one gateway performs management of communications with at least one remote user. Myer discloses the at least one gateway (control network portal 12) performs management of communications with at least one remote user (col. 4, lines 28-50). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Myer with Clare to facilitate device configuration in a network as supported by Myer (col. 1, lines 26-30).

36. Referring to claim 29, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose comprising at least one database separate from the plurality of network elements. Myer discloses comprising at least one database separate from the plurality of network elements (col. 3, lines 45-50). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Myer with Clare to facilitate device configuration in a network as supported by Myer (col. 1, lines 26-30).

37. Referring to claim 31, Clare-Wesson in view of Myer discloses the invention substantively as described in claim 29. Claire further discloses data-driven alerting methods that recognize conditions on user-defined data relationships (i.e. user profiles) including coincidence in signal arrival, node power status, and network communication status (col. 18, lines 35-64).

38. Referring to claim 32, Clare-Wesson in view of Myer discloses the invention substantively as described in claim 29. Although Clare-Wesson does not specifically state implementing the database in a small footprint database and in a SQL database systems at a level of at least one server, it is well known that these features exist and would have been obvious to one of ordinary skill in the art to incorporate a small footprint database to the invention of Clare and Myer to provide the productivity and reliability that a SQL database allows, while still keeping information search and retrieval times to a minimum.

39. Claims 46, 47, 50 and 51 are rejected for similar reasons as stated above.

Claims 7, 9-13, 33, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare-Wesson as applied above in view of Humpleman et al. (USPN 6,546,419) (hereinafter Humpleman).

40. Referring to claim 7, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose managing the plurality of network elements as a distributed database using a distributed resource management protocol, wherein the plurality of network elements are reused among different applications, wherein the network elements are used in multiple classes of applications. Humpleman discloses managing the plurality of network elements as a distributed database using a distributed resource management protocol, wherein the plurality of network elements are reused among different applications, wherein the network elements are used in multiple classes of applications (the servers and clients can reside on the same node and execute both client and server applications) (col. 6, lines 18-34). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare-Wesson with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).



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41. Referring to claim 9, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose having the node of the first type containing a preprocessor with a state machine, an API and at least one sensor.

Humpleman discloses a home sensor network wherein a first node 14 of a first type (Device A) contains a preprocessor with a state machine (it is inherent that a standard microprocessor emulates the effects of a state machine during its pipelining of instructions, fetch, decode, execute, store, etc.), an API (INTERFACE-A.xml), and at least one sensor (h/w) (e.g. abstract; Figure 16; col. 22, lines 52-58). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare-Wesson with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).

42. Referring to claim 10, Clare-Wesson discloses the invention substantively as described in claim 1. Clare in view of Wesson does not disclose having the node of the second type including at least one preprocessor coupled to at least one processor and a plurality of API's, wherein the plurality of API's are coupled to control at least one device. Humpleman discloses a home sensor network wherein the node 14 of the second type (device B), contains at least one preprocessor coupled to at least one processor (it is well known that a server computer has multiple microprocessors embedded within the server which are either directly or indirectly coupled together), a plurality of API's (INTERFACE-A.XML and INTERFACE-B.XML), wherein the plurality of API's are

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coupled to control at least one sensor device (i.e. smoke detectors) (e.g. abstract; Figure 16; col. 22, lines 52-58). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare-Wesson with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).

43. Referring to claim 11, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose layering the plurality of API's. Humpleman discloses layering the plurality of API's in the device (Figure 19, reference characters 72-92). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare-Wesson with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).

44. Referring to claim 12, Clare-Wesson discloses the invention substantively as described in claim 1. Clare further discloses enabling distributed resource management by providing network resource information and message priority information to the plurality of network elements (col. 14, lines 12-34; col. 15, lines 10-25). Clare does not specifically disclose enabling distributed resource management through the plurality of API's. However Humpleman discloses using the API's to enable distributed resource

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management (i.e. enabling services to be used via the API's) (Figures 15-19 and pertinent portions of the disclosure). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare-Wesson with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).

45. Referring to claim 13, Clare discloses the preprocessor (ADC) performs data acquisition, and the processor (DSP) performs signal identification (col. 18, lines 35-64).

46. Referring to claim 33, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson discloses sensing nodes supporting processing layers (i.e. superiors and subordinates), however does not disclose the node of a second type includes sensing, processing, communications, and storage devices supporting a plurality of processing and protocol layers. In analogous art, Humpleman discloses another sensor network wherein nodes include supporting a plurality of processing and protocol layers (col. 14, lines 20-34). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).

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47. Referring to claims 35 and 36, Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose a first network having a first node density is assembled using the at least one node of a first type, and a second node having a second node density is assembled using the at least one node of a second type, wherein the second network is overlayed onto the first network. Humpleman discloses a home sensor network wherein numerous sensors relating to different “services” (i.e. HVAC, security, utility, appliances) are overlayed onto another (i.e. they are all connected to one network, however they are considered their separate entities) (col. 22, line 17 to col. 23, line 7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clare with Humpleman to be able to control a plurality of diverse devices having different capabilities to communicate in order to accomplish tasks or to provide a service as supported by Humpleman (col. 2, lines 38-45).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare-Wesson in view of Davis et al. (USPN 5,742,829) (hereinafter Davis).

48. Clare-Wesson discloses the invention substantively as described in claim 1. Clare-Wesson does not disclose distributing code and data anticipated for future use through the sensor network using low priority messages, wherein the code and the data are downloadable from a storage device. Davis discloses a network wherein distributing code and data anticipated for future use through the sensor network using

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low priority messages (i.e. in the background), wherein the code and the data are downloadable from a storage device (it is inherent that the code/data are downloaded from a storage device) (col. 6, lines 27-65). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Davis with Clare-Wesson to facilitate the installation of software on heterogeneous clients on the distributed network, thereby reducing installation costs and reducing downtime as supported by Davis (col. 2, lines 10-15).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare-Wesson in view of Makansi et al. (US 2002/0154631) (hereinafter Makansi).

49. Clare-Wesson discloses the invention substantively as described in claim 1. Furthermore it is an inherent feature of Clare to aggregate the data to be transmitted to a user to conserve energy by reducing the amount of packets and saving bandwidth. Clare does not disclose the message packets include decoy packets wherein information to be transferred is impressed on random message packets to provide communication privacy. Makansi discloses message packets include decoy packets wherein information to be transferred is impressed on random message packets to provide communication privacy on a network (e.g. abstract). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Makansi with Clare to provide messages to be transmitted in ways such that

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potential adversaries are given access to a relatively little amount of information as supported by Makansi (p. 1 ¶ 8).

### ***Response to Arguments***

50. Applicant's arguments filed June 10, 2009 have been fully considered but they are not persuasive.

51. On pages 14-15 of the remarks, Applicant argues, in substance, that Clare does not disclose the assembly of clusters, or the assembly of clusters via assembly packets that include a cluster indication as claimed in Claim 1. Examiner disagrees. Claim 1 does not recite any functional details about the cluster other than the fact that nodes are assembled into clusters using assembly packets that include a cluster indication. A cluster of nodes, given its broadest reasonable interpretation, can be a group of nodes which are close together. One way that nodes can be organized into a cluster is by proximity. For example, Clare discloses that for a given node n, a set of neighboring nodes is identified which are within a reliable communicating range of node n (See Col. 3, lines 63-67 & Col. 4, line 1). Fig. 2 shows a plurality of communicating neighbors 207 linked by solid lines that collectively form a cluster. Nodes 208 are not part of the cluster since they are outside of the communication radius of nodes 207. Clare further teaches the cluster being assembled via assembly packets (*"The startup network may be one node, but the method will perform better with a larger number of startup member nodes. One of the startup member nodes (the "inviting node") transmits an invitation for*

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*a new node (with location unknown) to join the network*” – See Col. 4, lines 11-16; *“When a member node (the “inviting node”) issues an invitation which a new node receives, the new node responds. This indicates to both the inviting and the new node that they are communicating neighbors”* – See Col. 8, lines 49-52). A cluster between at least one inviting node and a new node is formed with the invitation. Examiner considers any packet exchanged between nodes during the invite procedure to be an assembly packet. Clare teaches an assembly packet that includes a cluster indication in the form of a communication schedule (*“The inviting node receives the response from the new node (230), and proceeds to schedule pair-wise communications between the new node and its potential communicating neighbor member nodes”* – See Col. 15, lines 1-4; *“the new node receives the pair-wise communication schedule (232)”* – See Col. 15, lines 11-12). The communication schedule is a cluster indication because it identifies the new node’s communicating neighbors and a schedule for communicating with the neighbors. The same reasoning applies to Applicant’s arguments regarding Claims 46, 48, 50, 51, 54, and 56.

52. On page 16 of the remarks, Applicant argues, in substance, that Clare does not disclose modifying the cluster indication and transmitting the assembly packet with the modified cluster indication to each node neighboring the node. Examiner disagrees. As shown above in section 50, Clare discloses transmitting a cluster indication in the form of a communication schedule. Clare further teaches that after the new node receives the communication schedule in step 232, a new communication schedule is generated

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and sent to the new node's communicating neighbors (*"The new node and the inviting node then measure their inter-node range (238). After the range is measured, the inviting node generates a new communication schedule (240), based upon the set of potential communicating neighbors within the measured range, as discussed previously. The new node and the other member nodes will receive the new communication schedule, steps (242 and 244)"* – See Col. 15, lines 28-35). The same reasoning applies to Applicant's arguments regarding Claims 46, 48, 50, 51, 54, and 56.

53. On pages 18-19 of the remarks, Applicant argues that the provisional Double Patenting rejections based on applications 09/684,387 and 09/684,706 should be withdrawn. Examiner maintains the rejection. Applicant is invited to review the claim sets to find that those features are actually claimed in the other applications. For Example, in the '387 application, claims 33 and 54, etc. Applicant is requested to file a Terminal Disclaimer for those applications in order to overcome the Double Patenting rejections outlined above in order to move this case to allowance.

### **Conclusion**

54. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not



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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Sciacca whose telephone number is (571) 270-1919. The examiner can normally be reached on Monday thru Friday, 7:30 A.M. - 5:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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